

STATEMENT OF FINDING:
TEMPORARY CLOSURE
OF
THE FORMER MT. MCKINLEY NATIONAL
PARK AREA
OF
DENALI NATIONAL PARK AND PRESERVE
TO THE USE OF SNOWMOBILES
FOR TRADITIONAL ACTIVITIES



DENALI NATIONAL PARK AND PRESERVE

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Table of Contents

I.	Introduction	1
II.	Background Information	2
III.	Park Resource Values	4
	A. Significance of Park Resource Values	4
	B. Description of Park Resource Values	4
	1. Values in Legislation and Policy	4
	2. Inherent Resource Values	5
	3. Values Protected/Reinforced Through Past Actions	7
IV.	Effects of Snowmobile Activity	8
	A. Detrimental Effects on Natural Resources	9
	1. Wildlife	9
	2. Vegetation and Soils	13
	B. Conflicts with Other Recreation Use	15
	C. Interference with Subsistence Opportunities	16
	D. Additional Concerns	16
	1. Lack of Pertinent Studies	16
	2. Need for Research of Impacts to Air and Water Quality	17
V.	Public Participation Process	18
VI.	Compliance Considerations	19
VII.	Summary	19
VIII.	Findings	21
IX.	Signatures	22
	ANILCA Section 810(a) Summary of Evaluations and Findings	Appendix A
	Temporary Closure Categorical Exclusion	Appendix B

I. Introduction

This document describes the basis for the decision of the Alaska Regional Director, National Park Service, to temporarily close most of the former Mt. McKinley National Park area (also referred to as “the old park”) of Denali National Park and Preserve to the use of snowmobiles for traditional activities. Two corridors on the south side of the Alaska Range, within the former Mt. McKinley National Park, have been excluded from this temporary closure and will continue to be available for traditional activities. This decision complies with section 1110(a) of the Alaska National Interest Lands Conservation Act (ANILCA) and the implementing regulations at 43 CFR 36.11 (h). This action is necessary to prevent harm to the resource values of the former Mt. McKinley National Park, including its wildlife, wilderness and other natural resources, opportunities for quiet and solitude and the undisturbed conduct of non-motorized activities within this area. At the same time, it also provides an opportunity to collect pertinent information that will be used in upcoming planning efforts. Neither section 1110(a) nor anything in this decision affects the continued closure to the public of the entirety of Denali National Park and Preserve to the use of snowmobiles for other than traditional activities.

The use of the terms “temporary closure” or “closure” hereafter means the closure of the former Mt. McKinley National Park with the exclusion of two corridors. Further description of the corridors is provided in the Summary.

This decision will:

- Prevent Degradation of Park Natural Resource Values;
- Prevent Degradation of Park Wilderness Resource Values; and
- Prevent Conflicts among Different Recreational Users;

within the area of the former Mt. McKinley National Park boundaries, while the National Park Service considers and analyzes a permanent closure pursuant to ANILCA and completes a planning process (and its attendant information gathering, analysis, and public participation mechanisms), pursuant to National Park Service policy and the National Environmental Policy Act. The National Park Service also wants to clearly communicate to the public its intention to improve protection of resource values by using the time period of this temporary closure to conduct research, gather pertinent information, and to develop a better understanding of what it takes to manage snowmobile use in the former Mt. McKinley National Park.

This temporary closure is in direct response to recent developments of snowmobile use patterns and intensity that constitute a marked departure from past snowmobile exclusion in the affected area. An additional regulation may be initiated to maintain this closure until the Backcountry Management Plan is completed. Upon finalization of the Denali National Park and Preserve Backcountry Management Plan, the National Park Service will consider promulgating regulations that may alter, rescind, or maintain this closure.

This temporary closure will have little effect on the long-standing use patterns of the area. As noted in more detail later in this document, the former Mt. McKinley National Park area was not

open to snowmobile use prior to the passage of ANILCA. There was no history of authorized general public snowmobile use in the old park for any activity, traditional or otherwise. The enactment of section 1110 (a) of ANILCA left this general prohibition of snowmobile use in the old park area intact unless the snowmobile use was for the purpose of conducting a "traditional activity". Snowmobiling unconnected with some "traditional activity" did not fall within the terms of section 1110(a) and thus, remained prohibited in the old park.

II. Background Information

The former Mt. McKinley National Park portion of Denali National Park and Preserve, which constitutes approximately one-third (2.2 million acres) of the park/preserve complex, has been consistently managed as closed to snowmobile use by the general public.¹ This temporary closure would neither diminish, nor alter, access now enjoyed by snowmobile users on the remaining two-thirds of park and preserve land, which encompasses another four million acres.

The use of mechanized equipment in the winter by the general public did not regularly occur in the two million acres of the former Mt. McKinley National Park from 1917 to 1970 largely due to remoteness and the lack of dependable equipment. The administrative use of mechanized

¹ Federal Register, Vol.35, No. 139, 11553. July 18, 1970. Title 36 CFR, Part 2.34 Snowmobiles;

Superintendent's Orders. June 14, 1979. 36 CFR 2.34 "Snowmobiling is prohibited in Mt. McKinley National Park.", 36 CFR, 1979;

Compendium for Denali National Park and Preserve. 1984. "Use of snowmobiles for recreation is not traditional within the pre-1980 park" p. 8;

Denali National Park and Preserve General Management Plan. 1986. pp. 37-38.;

Collateral Forfeiture Bond Schedule. 1990. Alaska Region Revision. "Prohibited non-traditional snowmobile access, \$100." [in reference to 36 CFR 2.18; 43 CFR 36.11 (I); 43 CFR 36.11c].;

Compendium for Denali National Park and Preserve. May 21, 1992. Section 2.18 Snowmobiles. "For the purposes of this subsection [2.18], a traditional activity is defined as an activity that was regularly practiced in the former Mt. McKinley National Park prior to the 1980 passage of ANILCA. The use of snowmobiles does not fit this definition. Therefore, they [snowmobiles] are not allowed....All new areas included in the 1980 park additions are available for snowmobile use during times of adequate snow cover.";

National Park Service News Release. March 8, 1993. "Snowmobile Use in Denali National Park and Preserve." Alaska Regional Office, Anchorage.

equipment in the winter for patrols and maintenance of facilities was also very limited and was phased out by 1974 in favor of dog teams, the historic means of access since park establishment. A concession contract for passenger and freight transport by dog team was developed in 1974, which further emphasized what was and continues to be the preferred means of winter access for the area. Current endorsement of this philosophy is manifest in three commercial dog sled tour businesses that are authorized to use the park and that depend on wilderness values for experiential aspects of their services.

In 1970, when snowmobile use generally became a more common activity, and therefore a concern to park managers, the former Mt. McKinley National Park was closed to public snowmobile use under a nationwide regulation. From 1970 to 1980, illegal incursions into the old park by snowmobile users were sporadic and involved minimal numbers of individuals in localized areas. The National Park Service enforced the regulation by regular patrols, the posting of signs, visitor education efforts, and issuance of violator warnings. As snowmobile technology evolved during the 1980s and early 1990s, more individuals began to use the lands adjacent to Denali National Park and Preserve as well as the ANILCA additions for snowmobiling. Incursions into the area of the former Mt. McKinley National Park continued to be infrequent.

Snowmobile use in and near the former Mt. McKinley National Park area began to increase in the early 1990s. The increased usage occurred simultaneously with an increase in snowmobile sales and use throughout Alaska. In addition to increased snowmobile activity, the character and pattern of the use also changed. Snowmobile manufacturers began production of more reliable, higher performance vehicles that could access steep terrain and travel greater distances. Snowmobiling changed from a utilitarian form of access for the traditional activities discussed in ANILCA, such as hunting or trapping, into a new and popular recreational activity in and of itself. During the past five years, this change in the type of use, the increased capability and reliability of snowmobiles, and the increased numbers of snowmobile users, have resulted in numerous incursions into the old park in a limited number of drainages on the south side of the Alaska Range. Unless such incursions were for the purpose of conducting traditional activities, this usage was and is prohibited. Concern for dramatic new pressures on park resources escalated with publication of a newsletter article² urging recreationists to travel throughout the former Mt. McKinley National Park area.

The decision has been made to institute a temporary closure and allocate administrative resources for enforcement of that closure because the current ecological data addressing effects of general snowmobile activity on wildlife and vegetation indicate that snowmobile use will result in the degradation of the historically shielded natural resources of the old park area and would therefore be detrimental to the resource values of the unit or area. Furthermore the following reasons have contributed to this finding. Scientific research that demonstrates that the subarctic alpine tundra of the Alaska Range would not be impacted by snowmobile use and the effects that snowmobiling activity may have on the long-term health of the Denali Park ecosystem are uncertain. The potential for resource damage due to

² Alaska Snow Rider (October 1998). Volume 9, Issue 6.

motorized recreational incursions into the closed area, the impacts that would result on non-motorized users engaged in traditional activities, and the harm to park values, including the unparalleled opportunity for observation of wildlife populations protected for decades from intrusive human encounters are anticipated. ANILCA does not require the Park Service to wait for actual damage to occur before taking protective action, but instead a determination that such use would be detrimental may be made under these factual circumstances.

During this temporary measure, the Park Service will further evaluate these impacts.

III. Park Resource Values

A. Significance of Park Resource Values

Section 1110 (a) of ANILCA stipulates that, within conservation system units, various means of access, including snowmobiles, shall be allowed for conducting traditional activities, subject to reasonable regulation, in the interest of protecting natural and other values. Furthermore, this section specifies that those uses will not be prohibited unless they are found to be detrimental to resource values. Regulation and/or prohibition of use is therefore dependent upon an understanding of the conservation system unit values. These values are described in the following paragraphs.

In this context, it is appropriate for the National Park Service to define "resource values", to make determinations about what levels of change would be regarded as detrimental to those resource values, and to allocate resources to various recreational uses based on those determinations.

B. Description of Park Resource Values

1. Values in Legislation and Policy

The mission of the National Park Service is to preserve unimpaired the natural and cultural resources and values of the nation for the enjoyment, education, and inspiration of this and future generations.³ Park Service policy, therefore, is to adopt those methods and procedures that will provide the American people with the opportunity to enjoy natural environments evolving through natural processes, minimally influenced by anthropogenic disturbance.⁴ These qualities include

³ National Park Service Strategic Plan. 1997, p 6.

⁴ National Park Service Management Policies. 1988, p. 4:1.

tangible and intangible attributes of natural systems, including natural quiet, solitude, open space, scenery, and the sounds of nature.⁵

In addition, section 101 of ANILCA sets out the purposes of that act and provides insight into the values of conservation system units in Alaska, including Denali National Park and Preserve. Some concepts found in that section include the preservation of scenic and geological values of natural landscapes, maintenance of sound populations of and habitat for wildlife species, protection of resources with subsistence importance, preservation of the natural state of extensive, unaltered ecosystems, preservation of wilderness resource values, and provision of recreational and research opportunities. The section is replete with descriptive terms such as “unrivaled,” “inestimable,” “vast,” and “undisturbed”; each providing qualitative understanding about the unit’s resource values.

In compliance with its statutory mandates, including the park’s enabling legislation, and agency policies, Denali National Park and Preserve, including the former Mt. McKinley National Park, is managed to provide protection for geologic, scenic, wildlife, habitat, and water resources and unaltered ecosystems; to provide for subsistence opportunities in the ANILCA additions; to maintain opportunities for scientific research in undisturbed ecosystems; to preserve wilderness resource values; and to provide for recreational opportunity by the visiting public.⁶

2. Inherent Resource Values

The primary purpose of Denali National Park and Preserve and, in particular, the area of the former Mt. McKinley National Park, is to protect the intact and naturally functioning subarctic ecosystem, which has outstanding opportunities for wildlife viewing and wilderness recreation. This purpose has been supported repeatedly in discussions with the public during the development of recent park planning documents. It has also been the foundation for more than 80 years of administrative decisions for the portion of the current Denali National Park and Preserve that was formerly Mt. McKinley National Park.

The health of this shielded ecological system is the foundation for one of the world’s finest wildlife viewing opportunities. The possibility of seeing bears, wolves, caribou, moose, Dall sheep, and many other animals against the backdrop of a spectacular subarctic, alpine landscape and vegetation is the cornerstone of a multimillion-dollar tourism industry in Alaska. These wildlife populations in the old park area are available for this unparalleled viewing opportunity precisely because they have been protected from intrusive interactions with humans for decades.

⁵ Ibid.

Listen Up, USDI Vol. 1, Issue1.

⁶ Strategic Plan, Denali National Park and Preserve. 1997, p. 5.

The pre-ANILCA portion of Denali National Park and Preserve provides a unique wilderness recreation opportunity in Alaska. There is no other large, naturally regulated ecosystem in the entire 375 million acres of Alaska that is as free from motorized use in the winter months.

The park's Statement for Management goes on to identify the wilderness recreation values of Denali National Park and Preserve:

Denali offers superlative opportunities for primitive wilderness recreation. Outstanding cross-country hiking, backcountry camping, and winter touring possibilities are available for one willing to approach the area in its natural condition. This huge park contains large, almost entirely trailless areas where evidence of human use is minimal to nonexistent. These backcountry conditions are in contrast to most Lower 48 wilderness areas where maintained trails, designated campsites, footbridges, and signs are the norm.⁷

Even the intrinsic value of the park, for people in the contiguous 48 states who may never even visit the place, is recognized.⁸

This area provides a unique resource to those members of the public who seek solitude, natural quiet, and a non-motorized winter recreational experience because it is relatively accessible, compared to the rest of Alaska. No other area with all these special qualities is readily available or adjacent to the road system of Alaska. Low density, winter, non-motorized recreation has developed in this area through the last 75 years of National Park Service management.

Furthermore, Denali fills a special gap on the nationwide recreation opportunity spectrum.

All national park system units, by virtue of planning and administrative decisions, fall somewhere in that spectrum, which ranges from highly pristine, remote and sparsely used lands to highly developed, readily accessible, and intensively used recreation areas. Denali's legislative mandates and administrative history place the park toward one end of that spectrum with parks that can be characterized as wild, rustic, and expansive. Denali rests somewhere between the extremely remote, lightly used Alaska national park units and the large, wilderness parks of the Lower 48 states that are highly accessible and more developed.⁹

The area of the former Mt. McKinley National Park is one of the most important natural areas in the world because it has been protected from most consumptive or otherwise altering uses for more than 75 years and still functions as a naturally regulated system. Recording and gaining

⁷ Statement for Management, Denali National Park and Preserve. September 1995, p.11.

⁸ Ibid., p.9.

⁹ Ibid., p. 9.

understanding of a naturally functioning subarctic system with minimal disturbance by people is one of the greatest long-term values of this area.

Finally, this largely undisturbed area is regularly referred to as a comparison site for scientific studies throughout the circumpolar region.

3. Values Protected/Reinforced Through Past Planning and Management Actions

Since 1917, when Mount McKinley National Park was established, the core area of the park has been continually protected and, in fact, has been the only place in the interior and northern parts of Alaska where a management scheme has been repeatedly invoked for the protection of wildlife through minimal disturbance of natural wildlife conditions and for the preservation of wilderness values for the public. Thus, a very special natural system developed where predator-prey relationships have functioned with minimal human interference. The unparalleled array of Alaska wildlife regularly seen from the Denali Park Road and the opportunity to see natural predator-prey interactions is one of the primary visitor attractions at the park. Key factors that have contributed to the development of this opportunity have been the policies of restricting private vehicles on the park road in the summer, continuing the prohibition of snowmobile use in the winter, addition of parklands around the former Mt. McKinley National Park, and dispersal of people in the backcountry.

The long-standing ecological integrity and values of the old park were clearly an important concern of those who crafted ANILCA. Lands were specifically added to the former Mt. McKinley National Park on the north side of the Alaska Range and in the Cantwell/Dunkle Hills area for the expressed purpose of protecting it and its unique values.

These special resource values have been repeatedly expressed by the National Park Service and the Department of the Interior in various planning documents published by the park since the enactment of ANILCA and in follow-up management actions. For example, the 1986 general management plan for the park provides for dispersion of use to minimize the impacts of visitation on the park resources:

To the extent possible, visitor use will remain dispersed so that no areas become overused. If visitor pressure for the use of the backcountry increases, park managers may add accessible areas in the new park and preserve additions to the backcountry permit system. The proposed development of new facilities on the south side of the park (see "Visitor Use and General Development") will facilitate access to and use of backcountry areas in this part of Denali. Future increases in demand for backcountry recreation can be met on the south side, allowing perpetuation of appropriate levels of use throughout the entire park. The south side will be included in a Backcountry Management Plan.

The park intends to maintain primarily a "no formal trails" policy for the designated Denali wilderness area. Generally, hiking routes in this portion of the park follow natural drainages and therefore do not require designation or

maintenance. The no-trails policy will be extended to include the northern additions to the park wherever possible. The trails near the park entrance and the short loop trails along the park road corridor will be maintained for continued use. A formal trail plan will be developed for the Riley Creek/hotel area. The McGonagall Pass trail from Wonder Lake will be retained. The feasibility of building and maintaining trails in the southern additions to the park will be studied as part of the south side development concept plan.¹⁰

The former Mt. McKinley National Park has been designated an International Biosphere Reserve, in large part, for its unique scientific values. It has also has been specifically selected for long term ecological monitoring by the National Park Service and other federal agencies. It was selected over other Alaska parks largely because of the historic level of protection and ecological integrity of this core area.

IV. Effects of Snowmobile Activity

Under section 1110(a) of ANILCA as well as other laws, the National Park Service has an affirmative responsibility to make sure that any new activity or changes in the level of existing activities will not have a detrimental effect on resource values that are to be protected for future generations. Section 1110(a) provides for closure by the Secretary of the Interior if use "would be detrimental to the resource values of the unit or area". Thus, in meeting its responsibilities, the Park Service need not wait for actual damage to occur before taking protective action to prevent degradation to wildlife and other natural resources.

Much of the available research data on snowmobile effects is from areas outside of Alaska. This is because the level of use in those areas has already increased to a point that has triggered significant concern for the protection of resource values, or it has already created major conflicts among user groups. The growth in snowmobile use is an increasing concern for land managers and the public in Alaska as well, but the growth is so recent that there has not been enough time to conduct local studies.

Despite the lack of local studies, valid conclusions can still be drawn by combining the existing information on the resources of the former Mt. McKinley National Park that have been acquired through many surveys and studies with the available research on snowmobile effects gathered in other areas. Research on snowmobile effects was reviewed to identify the primary mechanisms of impact such as changes in animal activity levels or habitat use, alterations of plant growing conditions, or noise intrusion on other user groups. These predominant mechanisms of impact were then compared with the local studies and the previously described resource values of the Denali area to see if there was a significant likelihood of similar interactions.

¹⁰ General Management Plan, Land Protection Plan and Wilderness Suitability Review, Denali National Park and Preserve/Alaska. October 7, 1986, p. 61. Concurred in by Assistant Secretary for Fish and Wildlife and Parks William P. Horn on November 7, 1986.

Sufficient information was found to support the conclusion that the results from other research are transferable to the assessment of probable impacts from increased snowmobile use in the core portion of Denali National Park and Preserve. Those findings are described in the following sections.

A. Detrimental Effects on Natural Resources

1. Wildlife

Several studies have been conducted that show the direct impact of repeated snowmobile use on wildlife behavior and levels of physiological stress.¹¹ Many of the studies showed behavioral effects on the same species that occur at the old park area of Denali. These studies, as well as others on different species such as deer, indicate that snowmobile activity does alter the behavior of a wide variety of animals. These studies confirm that exposure of wildlife to snowmobile usage results in behavioral alteration, habitat avoidance, and energy expenditures at critical times when animals are under extreme stress due to winter privations. Winter is an extremely difficult time of

¹¹ Aune, K. E. 1981. Impact of Winter Recreationists on Wildlife in a Portion of Yellowstone National Park, Wyoming. M.S. thesis; Montana St. Univ., Bozeman. 111 pp;

Dorrance, M. J., P. J. Savage, and D. E. Huff. 1975. Effects of Snowmobiles on White-Tailed Deer. J. Wildl. Manage. 39(3):563-569. 1975;

Freddy, D. J., W. M. Bronaugh, and M. C. Fowler. 1986. Responses of Mule Deer to Disturbance by Persons Afoot and Snowmobiles. Wildl. Soc. Bull. 14:63-68. 1986;

Moen, A.N., S. Whittemore, and B. Buxton. 1982. Effects of disturbances by snowmobiles on heart rate of captive white-tailed deer. N.Y. Fish and Game J. 29(2):176-183;

Neumann, P. W. and H. G. Merriam. 1972. Ecological effects of snowmobiles. Can. Field-Nat. 86:207-212;

Rudd, L.T., and L.L. Irwin. 1985. Wintering moose vs. oil/gas activity in western Wyoming. Alces 21:279-298;

Simpson, K. 1987. The effects of Snowmobiling on winter range use of mountain caribou. B.C. Minist. Environ. Parks Wildl. Working Rep. No. WR-25. 13p;

Tyler, N. J. C.. 1991. Short-term Behavioural Responses of Svalbard Reindeer to Direct Provocation by a Snowmobile. Biological Conservation (56), pp. 179-194;

Voyageurs National Park. 1996. Restricted winter use report. Voyageurs National Park (1992-1996). Voyageurs National Park, International Falls, Minnesota. 21pp.

year for animals in the old park area at Denali. Concerns expressed in other studies over the cumulative effects of a disturbing activity that increases energy expenditures are also valid at Denali. Surveys and research show that animals at Denali also seek specific habitats in winter to help them survive. Moose, for example, seek out certain types of willow stands. The inability to use these important areas could have serious consequences at this stressful time of the year. Observations by Alaska Department of Fish and Game biologists in the Talkeetna Mountains near Denali indicate that increasing recreational snowmobile use is beginning to alter moose use of preferred treeline willow habitats.¹² This illustrates that the type of effects noted in studies from other areas appear to be starting to occur in the vicinity of the former Mt. McKinley National Park.

Even in those studies that did not examine or demonstrate long-term abandonment, animals still showed an alteration in activity patterns and increase in movements that elevated energy expenditures.¹³ Any increase in stress through added energy expenditure or loss of preferred habitat is a concern in the difficult times of winter. In the former Mt. McKinley National Park, there is the possibility of many additional miles of snowmobile trails and increased snowmobile activity levels throughout all types of habitats. This area of previously protected habitat is particularly vulnerable to increased disturbance given its close proximity to the George Parks Highway. This new pattern of use will leave little opportunity for wildlife avoidance and refuge. This major change in the level and extent of human activity in this historically undisturbed winter environment will affect many animals over a large area. It would also represent a significant change from the long-standing patterns of non-intrusive human interaction with wildlife. Consequently, the stress created by any alterations in winter habitat use or energy expenditures will occur at a level of more than just a few individuals adjacent to a single trail. This added stress to individual animals and the system as a whole would be in addition to any that is already occurring from human activity in the summer months.

Although some studies indicate that an individual skier can cause a greater response than a single snowmobile,¹⁴ some of these studies were done on trail systems or in areas where animals were

¹² Personal Communication from Biologist Hermann Griesse, Palmer Office, Alaska Dept. of Fish and Game.

¹³ Eckstein, R.G., T.H. O'Brien, O.J. Rongstad and J.G. Bollinger. 1979. Snowmobile effects on movements of white-tailed deer: A case study. Environmental Conservation 6(1): 45-52;

Richens, V. B., and G. R. Lavigne. 1978. Response of White-Tailed Deer to Snowmobiles and Snowmobile Trails in Maine. Can. Field-Nat. 92:334-344. 1978.

¹⁴ Aune, K. E. 1981. Impact of Winter Recreationists on Wildlife in a Portion of Yellowstone National Park, Wyoming. M.S. thesis; Montana St. Univ., Bozeman. 111 pp;

Freddy, D. J., W. M. Bronaugh, and M. C. Fowler. 1986. Responses of Mule Deer to Disturbance by Persons A foot and Snowmobiles. Wildl. Soc. Bull. 14:63-68;

more familiar with snowmobiles and other motorized equipment than with people on foot or skis. Studies in other areas where all types of use were equally unfamiliar to animals or not restricted to trails, such as the Denali situation, could demonstrate equal or greater responses to snowmobiles. Information on relative impacts must also be considered in the context of the frequency of encounters and the distance at which the animal is likely to be first disturbed. The much larger total area that will be traversed by a snowmobile per unit of time dramatically increases the relative effects of snowmobile use in an area.¹⁵ The new levels of snowmobile use that the proposed closure is designed to control represents a significantly greater threat than the current low-level use by non-motorized recreationists.

Some members of the public stated that they did not see animals move in response to snowmobile passage. Animals still may be experiencing considerable stress in those situations.¹⁶ While it has been suggested that animals may habituate to snowmobile traffic, research has found no direct evidence of habituation and subsequent reduction of stress. There was no reduction in either the magnitude of the heart rate response or the time of return to a normal rhythm.¹⁷ What appears to be habituation could also be the decrease in animal response to a particular stimulus through time as a result of the progressive weakening of an animal's physical condition throughout the winter and/or the need to preserve critical winter stores.¹⁸ The additional stress by snowmobile traffic at a difficult time of year could lead to decreased survival rates that would create changes in predator/prey relationships thus beginning a ripple through the entire system. Such changes would compromise the value of the old park area of Denali as a site for comparative studies.

The public also expressed concerns over the impact to ptarmigan, and there is evidence of impact from snowmobile use on this species.¹⁹ Local subsistence users have also expressed concern about

Eckstein, R.G., T.H. O'Brien, O.J. Rongstad and J.G. Bollinger. 1979. Snowmobile effects on movements of white-tailed deer: A case study. Environmental Conservation 6(1): 45-52.

¹⁵ Brader, Robert B. 1974. Ecological Impacts of Off-Road Recreational Vehicles. USDA Forest Service General Technical Report NC-9. Pages 29-35.

¹⁶ Moen, A.N., S. Whittemore, and B. Buxton. 1982. Effects of disturbances by snowmobiles on heart rate of captive white-tailed deer. N.Y. Fish and Game J. 29(2):176-183.

¹⁷ Moen, A.N., S. Whittemore, and B. Buxton. 1982. Effects of disturbances by snowmobiles on heart rate of captive white-tailed deer. N.Y. Fish and Game J. 29(2):176-183.

¹⁸ Richens, V. B., and G. R. Lavigne. 1978. Response of White-Tailed Deer to Snowmobiles and Snowmobile Trails in Maine. Can. Field-Nat. 92:334-344.

¹⁹ Braun, C. E. 1971. Habitat requirements of white-tailed ptarmigan: Proc. Annu. Conf. West. Assoc. State Game Fish Comm. 51:284-292.

the increasing levels of recreational snowmobile use on ptarmigan populations adjacent to the Park.²⁰

Research from the old park shows that bears den throughout the area that is proposed for increased protection during a period when snowmobile use will occur. Additional stress from disturbance by increased human activity would have a detrimental effect on this species during this critical period of time.²¹ Of particular concern, is the period during the spring when bears are emerging from their dens and snow cover is still adequate for snowmobiling. Bears are normally in stressed physical condition at this time. Human disturbance will exacerbate the situation. Bears are one of the keystone species of the Denali ecosystem and one of the species that visitors come from around the world to view.

The compacted trails left by the passage of snowmobiles have several effects on wildlife. The compaction of snow can crush small mammals, trap them in their tunnels, or inhibit their movements.²² Public comment expressed concern that the numerous snowmobile trails that are frequently seen across open meadows could create subsurface "fences" or barriers in the snow that would affect subnivean (situated or living under the snow) animals on a larger scale than just a single trail. Just as in other areas where snowmobile use has been studied, there is a close connection in the old park between predators and this small mammal prey base. Changes in the prey base will alter predator populations.

Compacted trails also change distribution patterns of animals by providing energy efficient travelways that alter winter survival rates, predation rates, distribution patterns, availability of carrion for use by other species, and levels of human conflict.²³ Research at Denali also indicates that snow depth and winter travel conditions are important factors in winter survival for ungulates and the predators that depend upon them.²⁴ Public testimony and staff observations indicate that

²⁰ Denali Subsistence Commission Meeting Minutes. April 26, 1996 and June 28, 1993.

²¹ Goodrich, J. M. and J. Berger. 1994. Winter recreation and hibernating black bears *Ursus Americanus*. US. Biol. Conserv. 67(2): 105-110;

Watts, P.D., and C. Jonkel. 1988. Energetic cost of winter dormancy in grizzly bear. J. Wildl. Manage. 52(4):654-656.

²² Jarvinen, J.A., and W.D. Schmid. 1971. Snowmobile use and winter mortality of small mammals. Proceedings of the 1971 Snowmobile and Off-the-Road Vehicle Symposium, East Lansing, Michigan, pp. 130-140.

²³ Meagher, M., S. Cain, T. Toman, J. Kropp, and D. Bosman. 1994. Bison in the greater Yellowstone area: Status, distribution, and management. Paper presented at the National Brucellosis Symposium, Jackson Hole, Wyoming.

²⁴ Adams, Layne T., and B. Dale. 1998. Reproductive Performance of Female Alaskan Caribou. Journal of Wildlife Management. 62(4):1184-1195.

many animals such as moose, caribou, wolves, and other canids all use compacted trails when they are made available to reduce travel related energy expenditures. Consequently, many species are likely to be affected by the presence of extensive trail systems that will result from widespread new levels of snowmobile use. Observations from other areas indicate that compacted trails may be beginning to change competition among animals for scarce winter food resources. Compacted trails allow animals such as coyotes to hunt in areas of normally soft snow and start to compete with animals such as lynx that typically have the advantage in those habitats. Both of these species are present in the Denali area. The National Park Service and members of the public are also concerned that compacted trails will create easier travel routes and encourage wolves to unnaturally move from this protected core area onto adjacent lands where they could be trapped or hunted at increased levels. Compaction of snow in forage areas can also have other negative effects on wildlife foraging. It increases energy expenditure by ungulates such as caribou that must dig for vegetation in extremely stressful winter months.

All of these incremental disruptions of natural processes compromise the long-standing value of this area as a comparative site for scientific studies and the wildlife viewing experience for hundreds of thousands of visitors. This evidence within the scientific literature suggests that enforcement of the snowmobile closure is a prudent action to protect these unique and internationally valuable wildlife resources while definitive research and planning can be conducted and completed. The corridors, excluded from the closure, together with other park lands open to snowmobile use, will be used as study sites for research and information gathering. Wildlife impact studies are also scheduled to be addressed in the environmental impact statement required for adoption of the Backcountry Management Plan.

2. Vegetation and Soils

It is well known that snowmobiles can cause considerable abrasion and breakage of exposed vegetation, including seedlings, shrubs, and young trees.²⁶ Even when there is adequate snowcover to prevent direct abrasion of vegetation, the compacted trails formed by snowmobiles affect the subnivean environment by causing major temperature reductions and changes in

²⁵ Fancy, S. G., and R. G. White. 1985. Energy expenditures by caribou while cratering in snow. J. Wildl. Manage. 49(4):987-993.

²⁶ Greller, A.M. 1974. Snowmobile impact on alpine tundra plant communities. Envir. Conserv. 1(2):101-110;

Neumann, P. W., and H. G. Merriam. 1972. Ecological effects of snowmobiles. Can. Field-Nat. 86:207-212;

Wanek, W.J., and L.H. Schumacher. 1975. A continuing study of the ecological impact of snowmobiling in northern Minnesota. Final Research Report for 1974-75. Bemidji State College, Bemidji, Minnesota.

snowpack characteristics.²⁷ These changes alter species composition, change plant density, delay the melting of compacted winter trails, and provide moisture over a longer period of time to the vegetation in the trail area.²⁸ Changes in moisture and growing season are important in a northern environment where the growing season is already extremely short. These temperature reductions can change soil surface microstructure, which reduces the seed germination suitability of a site,²⁹ the storage organs of perennial plants, and spring flower viability.

As noted in the public comments and observations in the local area, all of these changes that relate to snow compaction can combine to make some winter trails visible in the summer. The visible evidence left in the summer from vegetation and soil changes created by winter use trails will mar wilderness landscape vistas for thousands of summer visitors. Allowing snowmobile use to continue to increase and expand into new areas would mean many miles of new, regularly used winter trails that do not currently exist.

Based on its knowledge of the resource, the National Park Service believes impacts are likely to be more severe in the former Mt. McKinley National Park area than in the locations in which the cited research was conducted. The sensitive vegetation and permafrost soils of the subarctic could increase the creation of these types of problems and delay or permanently prevent any recovery once the impact to soils and vegetation has occurred. The real potential for an irreversible impact, along with the likely possibility of widespread occurrence due to a new pattern of use, supports a closure as a reasonable and prudent action until more local studies can be conducted.

²⁷ Pesant, A.R., C. Fernet, L. Belzile, and J.L. Dionne. 1985. Effects of snowmobile traffic on yield and botanical composition of forage stands in Quebec. Can. J. Plant Sci. 65(3):543-552.

²⁸ Pesant, A.R. 1987. Snowmobiling impact on snow and soil properties and on winter cereal crops. Can. Field Nat. 101(1):22-32;

Evans, R.D., and R.W. Fonda. 1990. The influence of snow on subalpine meadow community pattern, North Cascades, Washington. Can. J. Bot. 68:212-220;

Keddy, P.A., A.J. Spavold, and C.J. Deddy. 1979. Snowmobile impact on old field and marsh vegetation in Nova Scotia, Canada: An experimental study. Environ. Manage. 3(4):409-415.

²⁹ Keddy, P.A., A.J. Spavold, and C.J. Deddy. 1979. Snowmobile impact on old field and marsh vegetation in Nova Scotia, Canada: An experimental study. Environ. Manage. 3(4):409-415;

Wanek, W.J., and L.H. Schumacher. 1975. A continuing study of the ecological impact of snowmobiling in northern Minnesota. Final Research Report for 1974-75. Bemidji State College, Bemidji, Minnesota.

B. Conflicts with Other Recreation Users and Detrimental Effects on Wilderness Values

Public comment and written correspondence submitted to the Park Service indicates evidence of widespread user conflicts between snowmobilers, cross-country skiers, skijors, and dog mushers. This testimony also establishes that the natural quiet, solitude, and undisturbed vistas of the former Mt. McKinley National Park are important resource values associated with wilderness that the public expects to exist and be protected now and for the future in Denali. Legal mandates and policies previously discussed also support that these are legitimate values of the area that the National Park Service is proposing to manage by the continuation of the historic closure of the old park area to snowmobile use. The traditional management of this area has also emphasized these values for the public for many decades.

Public comment shows that this opportunity for experiencing natural quiet and solitude in the area of the former Mt. McKinley National Park is highly valued and would be protected if the pre-ANILCA closure of this area for snowmobile use for traditional activities was re-established and the historic closure to snowmobile use for non-traditional activities was maintained. The number of comments received indicates that allowing snowmobile use to increase in this area would significantly damage the park resource values that are the foundation for the enjoyment of the area by another significant segment of the public engaged in traditional activities. Comments emphasized that even in a state as large and undeveloped as Alaska, there are very few areas where these values have been protected for so many decades as in the old park area of Denali. For example, at least 95% of Southcentral Alaska is open to snowmobile use.

Testimony also showed that providing multiple use areas would not resolve this conflict and impacts on the values of the old park. Many non-motorized recreationists utilize multiple-use lands, but solitude and natural quiet cannot be dependably found in those areas. There is a clear need to have at least some areas of parkland where members of the public can choose to be away from snowmobiles and the disturbances they create when they are interested in experiencing natural quiet or more solitude. An area without snowmobile use that corresponded to the area of the proposed closure for the old park area was repeatedly requested.

Snowmobile users testified that they never see non-motorized users in the areas where they ride. This may be because, as some local residents testified, they no longer go to areas they previously used because of the dramatic increase in snowmobile use that has eliminated the natural quiet and solitude they were previously seeking in the area. A study in Canada found that non-motorized users such as cross-country skiers were negatively impacted by the presence of snowmobiles, whereas snowmobilers tended to be more indifferent to non-motorized users.³⁰ It also found that cross-country skiers prefer self-propelled, low-impact activities that reflect their desire for solitude, tranquillity, and a relatively undisturbed natural environment. Snowmobile users preferred machine-oriented activities, which provided an outlet for adventurousness and sociability. Results of this study are consistent with public comment and behavior of users

³⁰ Jackson, E.L., and R.A. Wong, 1982. Perceived conflict between urban cross country skiers and snowmobilers in Alberta. Journal of Leisure Research. First Quarter.

observed in the Denali area. The National Park Service is extremely concerned that the non-motorized recreation opportunity that this portion of Denali National Park and Preserve has long been noted for will be eliminated if rising snowmobile use levels and their expansion into new areas are not controlled now.

Minimal evidence of human use is another value associated with wilderness areas. The public expressed concern about the impact of snowmobile trails on winter landscapes and the feeling of being in an area of wilderness. The "play" and hill climbing activities can cover many miles because of the range and speed of the modern snowmobiles. This establishes significant evidence of human presence that is not found throughout the majority of the closure area.

Significant conflict will occur between user groups if the closure is not implemented because the actions of one user group is having a serious detrimental effect on the unique park resource values of the former Mt. McKinley National Park that are critical to the experience of another equally valid group of users. When such conflicts arise among equally legitimate uses, some form of allocation is needed. The proposed closure will maintain the long-standing use patterns of the area while a public planning process can be conducted to implement a permanent allocation system among all permitted uses.

That planning process will include development of pertinent information and initiation of studies within the public snowmobiling corridors and on other park lands. Park Service research priorities include a review of sound levels created by snowmobiles. These studies, to be implemented during the temporary closure enforcement, will provide necessary quantitative information addressing the relationship between decibel level and distance with snowmobile use.

C. Interference with Subsistence Opportunities

The National Park Service has received public comment that recreational snowmobile use has begun to interfere with subsistence activities on adjacent lands.³¹ It is important to note that the superintendent does not intend to imply that there is any authorized existing subsistence activity within the former Mt. McKinley National Park. Rather, these reports suggest that subsistence activities in the park additions could be interfered as snowmobilers traverse these park lands en route to destinations within the old park area. A subsistence or "810 Analysis" has been completed for this closure action.

D. Additional Concerns

1. Lack of Pertinent Studies

A major concern of the National Park Service is a significant lack of information about cumulative impacts of snowmobile use. This lack of important information on long-term, or ecosystem level, effects increases the risk of detrimental impacts on resource values. Snowmobile impact studies

³¹ Denali Subsistence Commission Meeting Minutes, August 9, 1996.

have generally been conducted on a very small spatial scale and for only short time periods. This review of scientific data found no studies that evaluate the long-term impact of widespread, cross-country travel and multiple trail travel that commonly occurs in Alaska. Even large impact evaluations such as the one from a Montana evaluation and a large review commissioned by snowmobile clubs in Canada have focused primarily on designated trail systems.³² These assessments assume mitigation of impacts is possible because the impacts of trails and activity related to the trail can be controlled by routing and because these impacts also will have only limited spatial implications. However, there is no evidence to support this assumption of mitigation in situations where extensive cross-country travel can create disturbances throughout virtually all habitat areas. This lack of cumulative, long-term, and ecosystem based studies is a major concern because of Denali's value as a natural system and a benchmark for long-term studies of international importance.

The National Park Service is very concerned that there may be impacts in extreme northern environments that are not described or, at best, are poorly described. The potential for a rapid change in use levels coupled with this lack of information about northern systems places valuable resources at risk before change can be detected and protective actions taken. Once impact occurs in northern systems, it frequently takes a very long time to correct. Snowmobile use occurs in the winter when animals are already under significant stress. The degree of this natural stress may be more pronounced in the extreme conditions found throughout Denali National Park and Preserve relative to the locations where many of the studies on snowmobile use were conducted. Much of the area is also above treeline, which means an even harsher winter environment for animals and vegetation. Also, much of the area north of the Alaska Range regularly lacks sufficient snow cover to protect vegetation and soils due to low precipitation and windblown conditions. Sensitive permafrost soils are also present in many locations throughout the area.

2. Need for Research of Impacts to Air and Water Quality

In addition to park-specific studies concerning snowmobile impacts to wildlife, vegetation, wilderness resources, and conflicts with other winter recreationists, a number of studies may be necessitated under the Clean Air and Clean Water Acts. The two-cycle engines used in snowmobiles are known to emit high levels of hydrocarbons in the exhaust that do accumulate on the snow surface,³³ and ponds adjacent to trails have shown elevated concentrations of hydrocarbons.³³ Members of the public during testimony mentioned snowmobile exhaust as a

³² Montana Department of Fish, Wildlife and Parks. 1993. Programmatic environmental impact statement, Montana Snowmobile Grant Program. Prepared by Statewide Trails Program Coordinator, Montana Department of Fish, Wildlife and Parks;

Ontario Federation of Snowmobile Clubs. 1994. Snowmobiling and the environment. Prepared by Gartner Lee Limited.

³³ Adams, E.S. 1975. Effects of lead and hydrocarbons from snowmobile exhaust on brook trout (*Salvelinus fontinalis*). Trans. Amer. Fish. Soc. 2:363:373.

negative impact on recreational experience. This was given as one of the reasons why there is a need to separate snowmobiles from other users. Denali National Park and Preserve, including the old park area, is also a Class I area under the Clean Air Act, which means that the National Park Service has an affirmative responsibility to protect air quality. Research is needed on the possible impacts to water and air quality and the effect that non-point source pollution may have on long-term environmental quality baseline data gathering conducted within the old park boundaries and the monitoring role played by Denali National Park for environmental quality assessment. The corridors and ANILCA addition lands will be used as sites for these studies.

V. Public Participation Process

43 CFR 36.11(h) requires notice and hearing(s) in the vicinity of the area(s) directly affected by such closures and other locations as appropriate. Notice of the proposed temporary closure and hearings was provided in the form of an official press release which, was sent to approximately 1,000 people, newspapers, and other entities in early November 1998. Four public meetings were held from November 22, 1998, to November 25, 1998, in Fairbanks, McKinley Village, the Talkeetna area, and Anchorage. Additional meetings were also held with the primary special interest groups who have a stake in the proposed action. Written testimony was accepted until December 15, 1998. Public discussion of the proposal was extensive, with many articles, editorials, and opinion pieces published, as well as television and radio coverage broadcast.

At the public meetings, 105 people testified in favor of the proposed action, 72 against, and 11 were unclear in their statements as to their opinion. This public comment was reviewed for relevant information on use patterns and effects on resource values, which was then incorporated into this finding.

The following numbers summarize the written comments received during the comment period. The numbers shown in parentheses are the portions of the totals that were received from Alaskans.

Total Count of Written Comments Received (from Alaskans)	1,442
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Individuals

1,220(350)	in favor of proposed action
172 (90)	opposed to proposed action

Businesses

13(10)	in favor of proposed action
0(0)	opposed to proposed action

Associations

26(7)	in favor of proposed action
11(3)	opposed to proposed action

VI. Compliance Considerations

A Summary Evaluation and Findings, pursuant to Section 810 (a) of ANILCA, has been prepared by the park to document the impacts of this action on subsistence activities within the area. Lands within the former Mount McKinley National Park are closed to subsistence activities, and the analysis concluded that the action would not result in a significant restriction to subsistence uses.

The environmental consequences of issuing a temporary closure to snowmobile use for traditional activities in the old Mount McKinley National Park are minimal and are within the scope of those anticipated in the approval given for the park's General Management Plan in 1986. Under the guidelines issued by the National Park Service, implementing Section 1507.3 of the National Environmental Policy Act (NEPA), a Categorical Exclusion listed in 516 Departmental Manual 6, Appendix 7.4 A, applies to this action:

Categorical Exclusion A. (10):

"Modifications or revisions to existing regulations, or the promulgation of new regulations for NPS-administered areas, provided the modifications, revisions or new regulations do not:

- a) Increase public use to the extent of compromising the nature and character of the area or causing physical damage to it;
- b) Introduce noncompatible uses which might compromise the nature and characteristics of the area, or cause physical damage to it;
- c) Conflict with adjacent ownerships or land uses; or
- d) Cause a nuisance to adjacent owners or occupants."

This action does not qualify as an exception under the departmental NEPA guidelines, as listed in Appendix 2 to 516 DM 2. Therefore, additional NEPA assessment and documentation are not needed.

This evaluation, along with the Section 810 analysis on the effects of this action on subsistence resources and users, are included as Appendices to this document.

VII. Summary

At this time, the possibility of extensive and expanding snowmobile use for the non-traditional activity of recreational snowmobiling, in the former Mt. McKinley National Park portion of Denali National Park and Preserve, presents a threat to one of the most important ecosystems and wilderness resources on earth. The last five years of technological advances and increased popularity of snowmobiles have clearly demonstrated that this use pattern can quickly move into new areas and reach a high density. The potential for such rapid change in uses, based on the information presently available, now places extremely important resource values at risk of harm. Such uses, therefore, "would be detrimental to the resource values of the unit or area".

It is important to close the old park to protect wildlife, vegetation, soil, and wilderness values from detriment. It is also particularly important to close the old park so that it can continue to serve its long-standing role as an undisturbed comparison site for scientific studies.

It will be very difficult to evaluate the significance of this new use if benchmark information on the undisturbed condition of park resources is not obtained first. That information cannot be gathered when resource conditions are changing in response to the introduction of such a significant new use. There are many areas in and adjacent to Denali National Park and Preserve that can be used to examine the impacts of snowmobile use in the future. What is critically needed to resolve the uncertainty about the long-term ecosystem level effects of widespread snowmobile use is a large area for comparison where use has not or is not presently occurring. The unique history of very little snowmobile use makes the former Mt. McKinley National Park an appropriate site for this purpose. In addition, because some small areas of the old park have been exposed to some degree of snowmobile use and because these corridors may provide opportunities for research, they are excluded from the closure area of this finding. If research, other pertinent information, or planning efforts indicate that these areas would best serve park purposes and values without snowmobile use because such use would be detrimental, they may be closed at a future date.

These corridors are generally described as follows. One corridor is centered on the mainstem of Cantwell Creek and extends from the wilderness boundary to the base of the icefall on the Cantwell Glacier at approximately 4000 feet elevation. The second corridor connects the mainstem of the Bull River with the mainstem of the West Fork of the Chulitna River via Easy Pass. In both cases the corridors consist of routes in the valley bottoms and do not extend up major or minor tributaries to these waterways. Other areas such as Costello Creek, Ruby Creek, and Foggy Pass, within the old park, are not considered part of these corridors and are closed. A map of these areas, including conditions that will protect park values, enhance public safety, and promote research opportunities is available at park headquarters.

The type of snowmobile use seen today was not a traditional activity within the boundaries of the old park. It was generally not practiced in the area from 1917-1970 because the technology was not available. From 1970 to 1980, such activity was prohibited as a matter of regulation. Because this use was prohibited in the old park at the time of enactment of ANILCA, snowmobiling in the affected closure area cannot, itself, be characterized as having been a general traditional activity that Congress permitted to be continued subject to the requirements of ANILCA.

The National Park Service seeks to strike a reasonable balance among competing winter recreation users of the Denali National Park and Preserve. This current decision maintains existing opportunities for snowmobile use for traditional activities on all four million acres of park and preserve land added under ANILCA. No new restrictions on snowmobile use are imposed by this action in those areas. Non-motorized winter recreation may continue in both the old park area and in the ANILCA park and preserve additions. Conflicts between motorized and non-motorized

winter recreationists will be minimized and an opportunity for non-motorized recreationists to seek those areas where snowmobile use had not been established as a past traditional activity will be provided.

The legislative history of section 1110 (a) indicates that its purpose was to provide access in order to continue the conduct of otherwise legal traditional activities. Where such snowmobile access is harmful to the conduct of non-motorized traditional activities, the National Park Service believes that this statute allows either the imposition of limitations on snowmobile use or even closure in order to ensure the continuation of the traditional activity. In such circumstances, snowmobile use would be detrimental to the resource values of the former Mt. McKinley National Park.

Ample opportunities for economic development of snowmobile related winter tourism exist in other parts of Denali National Park and Preserve without compromising one of the few areas of the state where the potential still exists for offering non-motorized wilderness recreational opportunities. As Alaska and the rest of the circumpolar north develop, these opportunities for solitude and natural quiet, which are now taken for granted, will be lost for future generations as the population and technology push motorized uses further and further into remote and inaccessible areas.

A temporary closure for snowmobile use within the former Mt. McKinley National Park boundaries constitutes the most appropriate course of action pending the outcome of the ongoing planning process for the backcountry management plan.

This course of action constitutes the best option because it:

- Protects wildlife, vegetation, wilderness, and recreation resource values in the old park;
- Prevents interference with subsistence opportunities in park additions adjacent to the old park boundary by snowmobiles en route to destinations within the old park;
- Permits adequate time and opportunity to initiate appropriate scientific research germane to the issues invoked by snowmobile activity in the old park;
- Requires no additional EIS activity and ensures the most timely response to the issues invoked by snowmobile use in the old park;
- Maintains long-standing use patterns for traditional activities within the old park boundaries.

VIII. Finding


Based upon the information in this statement, analysis of the testimonies given at the four public hearings, and the nearly 1,500 comments received, I find snowmobile use for traditional activities “would be detrimental to the resource values of the unit or area” and that it is therefore both necessary and appropriate to close most of the former Mt. McKinley National Park portion of Denali National Park and Preserve to the use of snowmobiles for any traditional activities. As applied to the National Park System, section 1110(a) of ANILCA affects only the conduct of traditional activities within conservation system units. The closure of the Park to snowmobiles for non-traditional activities is unaffected by this decision. The historical closure of the old park area to snowmobiles, plus the unique nature of the protected Denali ecosystem, distinguish this

decision of a temporary closure from the situations that are likely to arise at those park areas established or expanded by ANILCA on which snowmobiling has never before been precluded or prohibited.

Therefore, pursuant to 43 CFR 36.11(h), the former Mt. McKinley National Park area of Denali National Park and Preserve, excluding two corridors (Cantwell Creek, Bull River - West Fork of the Chulitna River) intended to foster opportunities for information gathering, is closed to the use of snowmobiles for any traditional activities for the twelve month period commencing on the date of execution of these findings in order to prevent harm to the resource values of the former Mt. McKinley National Park, including its wildlife and other natural resources, as well as its opportunities for quiet and solitude and the undisturbed conduct of non-motorized traditional activities within that area.

IX. Signatures

Recommended by:




Superintendent
Denali National Park and Preserve

2/3/99

Date

Approved by:



Alaska Regional Director
National Park Service

2/2/99

Date

APPENDIX A

ANILCA Section 810(a) Summary of Evaluations and Findings

I. Introduction

This evaluation and finding was prepared to comply with Title VIII, section 810 of the Alaska National Interest Lands Conservation Act (ANILCA). It evaluates the potential restrictions to subsistence activities which could result from the closure of most of the former Mount McKinley National Park area (also referred to as "the old park") of Denali National Park and Preserve to snowmobile use by the general public. Two corridors would be excluded from the closure and would remain open for snowmobile use for traditional activities: on Cantwell Creek to the base of the Cantwell Glacier Icefall, and the Easy Pass loop connecting the Bull River to the Chulitna River.

II. The Evaluation Process

Section 810(a) of ANILCA states:

"In determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands . . . the head of the Federal agency . . . over such lands . . . shall evaluate the effect of such use, occupancy, or disposition on subsistence uses and needs, the availability of other lands for the purposes sought to be achieved, and other alternatives which would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes. No such withdrawal, reservation, lease, permit, or other use, occupancy or disposition of such lands which would significantly restrict subsistence uses shall be effected until the head of such Federal agency :

1. gives notice to the appropriate State agency and the appropriate local committees and regional councils established pursuant to section 805;
2. gives notice of, and holds, a hearing in the vicinity of the area involved; and
3. determines that (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands, (B) the proposed activity would involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and (C) reasonable steps would be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions."

ANILCA created new units and additions to existing units of the national park system in Alaska. Denali National Park and Preserve additions were created by ANILCA section 202(3)(a) for the purposes of:

"The park additions and preserve shall be managed for the following purposes, among others: To protect and interpret the entire mountain massif, and additional scenic mountain peaks and formations; and to protect habitat for, and populations of fish and wildlife, including but not limited to, brown/grizzly bears, moose, caribou, Dall sheep, wolves, swans and other waterfowl; and to provide continued opportunities including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities."

The potential for significant restriction must be evaluated for the proposed action's effect upon "... subsistence uses and needs, the availability of other lands for the purposes sought to be achieved and other alternatives which would reduce or eliminate the use." (Section 810(a))

III. Proposed Action on Federal Lands

The action will temporarily close most of the former Mount McKinley National Park to snowmobile use by the general public. The regulatory process outlined in 43 CFR 36.11(h) will be used to invoke this temporary closure. Two corridors will be excluded from the closure and will be open to snowmobiling. Snowmobiling in these corridors would provide opportunities to do research on the impacts from this use to the resource values of the old park, including natural wildlife movements, natural quiet, water, vegetation and soils resources, and wilderness values, including solitude. The old park remains closed to subsistence activities.

This closure will not change the current management policy regarding snowmobile use in the ANILCA additions to Denali National Park and Preserve. Research on impacts and the potential to mitigate the impacts to park values is necessary to inform the evaluations made in the park's Backcountry Management Plan. Lands within the boundaries of the former Mount McKinley National Park are not open to subsistence use activities. The action will not significantly restrict subsistence activities in the ANILCA park and preserve additions.

IV. Affected Environment

Introduction

In the last five years snowmobile use has expanded dramatically in the park additions, particularly in the area near Cantwell and Board Pass. Along with increasing popularity for snowmobiling has come dramatic improvements in snowmobile technology. Greatly increased reliability, power and floatation ability in the newer machines have made it possible to access many more distant areas and significantly steeper terrain of the park for snowmobiling.

Open habitat, mountainous slopes, and reasonably good snow deposition in the Broad Pass area have attracted increasing numbers of snowmobile riders from urban areas of the state. Snowmobilers ride through the new park additions, which are open to snowmobiling and subsistence uses, enroute to selected areas within the original park. Snowmobile groups have also expressed interest in other destinations such as the Eielson Visitor Center, the park road corridor, and Wonder Lake. Use of these other areas would increase snowmobile traffic connecting the interior Kantishna area as well as the Stampede Trail corridor.

Park Environment

Denali National Park and Preserve is located in the interior of Alaska and is dominated by an east to west line of towering glaciated mountains known as the Alaska Range. The range rises abruptly from lowlands 500 to 2,000 feet in elevation to the pinnacle of Mount McKinley, North America's highest mountain, at 20,320 feet. The range is perpetually snowclad above approximately 7,000 feet on the north and 6,000 on the south. Glaciers are numerous and tend to be larger and longer on the south side of the range than on the north.

Moisture from the Gulf of Alaska is blocked by the Alaska Range causing a continental climate to the north of the range and more of a maritime climate to the south. Moisture laden air from the south results in greater levels of precipitation on the southern flanks of the range. The average annual precipitation at park headquarters is 15 inches, while at some higher elevations in the park the total precipitation exceeds 80 inches and snowfall exceeds 400 inches. Normal snowpack throughout the region averages between 20 and 40 inches.

Vegetative cover in Denali is typical of interior Alaska taiga. Lowland floodplains are dominated by dense, deciduous or coniferous forest, or by a mixed forest of balsam poplar and white spruce. Upland forests tend to be more open with mixed or continuous stand of black spruce, white spruce, or aspen. Upland forests give way to shrub communities at elevations above approximately 2,400 feet. Glacial rivers flowing from the Alaska Range create broad floodplains that are sparsely vegetated. Tall shrub communities of willow and alder grow on moist slopes and along drainages, and low shrub communities of dwarf birch and willow grow at higher elevations or on dry slopes. Alpine tundra, composed of dryas and dwarf willow shrub, mat and cushion species, or grass and sedge mixes grows on slopes and ridges to about 6,000 feet. More than 650 species of flowering plants inhabit the slopes and valleys of the park.

The original Mount McKinley National Park was established in 1917 as a refuge for large mammals. In 1980 ANILCA enlarged the old park to more than 6 million acres, and redesignated the area as Denali National Park and Preserve. The protected subarctic ecosystem of Denali provides habitat for 30 species of mammals, at least 152 species of breeding birds, 16 species of fish (twelve resident species and four anadromous Pacific salmon species), and 1 amphibian. The American peregrine falcon is the only endangered species known to occur in the park and preserve. No known threatened aquatic or wildlife species are known to exist in the park and preserve.

About 100 archeological sites have been recorded within Denali National Park and Preserve. Archeological investigations conducted within and immediately adjacent to the park strongly suggests that sites dating from the Paleoarctic tradition (10,000 years before present) through the Protohistoric period (200 years before present) exist within the park. Excavations at the Dry Creek site, situated near the northeastern park boundary, have yielded one of Alaska's earliest dates, 11,000 B.P. The Carlo Creek site situated along the Nenana River on the eastern park boundary is dated at approximately 8,000 B.P. These sites may depict tool technologies and subsistence patterns representing the earliest peopling of North America by means of the Bering Land Bridge.

Historically, the Denali area was used by several Athabaskan Indian groups. The Ahtna people of Cantwell arrived from the east, the Tanana people came into the area from the north traveling up the Nenana and Toklat Rivers, the Koyukon people who lived at Lake Minchumina ascended the McKinley-Foraker-Herron Rivers, the Upper Kuskokwim people who still live in Nikolai and Telida approached the park from the west, and the Dena'ina people approached the park from the south. Subsistence activities included large mammal hunting, fishing, and small game trapping.

More comprehensive descriptions of the affected environment within Denali National Park and Preserve can be found in the following recent park documents.

- *EIS on the Entrance Area and Road Corridor Development Concept Plan for Denali National Park and Preserve, 1996.*
- *EIS on the South Side Denali Development Concept Plan, 1996.*
- *EIS on the Cumulative Impacts of Mining in Denali National Park and Preserve, 1990.*
- *An Overview and Assessment of Archeological Resources, Denali National Park and Preserve, Alaska, Research/Resources Management Report AR-16, Kristen Griffin, 1990.*
- *EIS on the Wilderness Recommendation, Denali National Park and Preserve, Alaska Planning Group, 1988.*
- *General Management Plan, Land Protection Plan, Wilderness Suitability Recommendation, Denali National Park and Preserve, 1986.*
- *Land Use in the North Additions of Denali National Park and Preserve: An Historical Perspective, Research/Resources Management Report AR-9, William Schneider, Dianne Gudgel-Holmes and John Dalle-Molle, 1984.*

V. Subsistence Uses and Needs Evaluation

Background Information

Denali National Park and Preserve is open to subsistence uses in accordance with Section 202 (3)(a) of ANILCA. Lands within the boundaries of the former Mount McKinley National Park including the temporary closure area are closed to subsistence activities. The corridors excluded from the closure are also not open to subsistence uses.

Denali National Park and Preserve has a total of about 320 eligible local rural residents who qualify for subsistence use of park and preserve resources. Subsistence users for the ANILCA park additions primarily reside in the communities of Cantwell, Minchumina, Nikolai, and Telida. Other local rural residents who do not live in these designated resident zone communities, but who have customarily and traditionally engaged in subsistence activities within the park, may continue to do so pursuant to a subsistence permit issued by the park superintendent. Individuals from McKinley Village, Nenana, Healy, and Tanana have received subsistence use permits.

Areas within Denali National Park and Preserve receiving the most extensive subsistence use activities are the northern park and preserve region near Lake Minchumina, and the southeastern park region near Cantwell. Primary subsistence resources harvested for the southeastern region are; moose, caribou and fish, with a limited number of households engaging in trapping of furbearers. Cantwell area subsistence users primarily utilize park lands in the Windy Creek and lower Cantwell Creek and Bull River drainages. In the northern region; moose, fish and furbearers are the major resources harvested with trapping being a significant subsistence use activity. In the northern region traplines extend into the Highpower Creek, Herron River, Foraker River, Birch Creek, Slippery Creek, Bearpaw River, and Teklanika River drainages as far as the old park boundaries.

Overall, Denali's main subsistence species are moose, caribou, ptarmigan, spruce grouse, hare, and few species of freshwater fish. Large mammals account for 70% of the resources used and fish account for 21%. Marten, mink, red fox, wolf, lynx, weasel, wolverine, land otter, beaver, muskrat, and coyote are important fur animal resources.

The National Park Service recognizes that patterns of subsistence use vary from time to time and from place to place depending on the availability of wildlife and other renewable natural resources. A subsistence harvest in a given year may vary considerably from previous years because of such factors as weather, surface snow conditions for traveling, wildlife migration patterns, natural population cycles, and wildlife conservation practices of leaving a trapline fallow periodically.

Potential Impacts to Subsistence Users

For several years subsistence users have expressed concerns about the impacts and conflicts of increasing snowmobile use on subsistence resources and activities. Members of Denali's Subsistence Resource Commission have express concerns regarding the increasing levels of

snowmobile use in the Broad Pass area and potential impacts to moose, furbearers^{A1} and ptarmigan^{A2} populations and their distributions.

To determine the potential impacts on existing subsistence activities, three evaluation criteria were analyzed relative to existing subsistence resources.

The evaluation criteria regarding the proposed action are:

- the potential to reduce important subsistence fish and wildlife populations by (a) reductions in number, (b) redistribution of subsistence resources, or (c) habitat losses;
- what affect the action might have on subsistence fisherman or hunter access;
- the potential for the action to increase fisherman or hunter competition for subsistence resources.

1. The potential to reduce populations:

(a) Reduction in Numbers:

The closure is not expected to reduce populations. Within the park, the closure would provide refuge areas for wildlife species displaced by increasing snowmobile use in adjacent ANILCA park/preserve additions.

(b) Redistribution of Resources:

A long research history documents that many species move back and forth between the old park and the new additions to Denali National Park and Preserve in a manner that creates an interrelated system. The closure would continue to provide an area of undisturbed habitat within the boundaries of the former Mount McKinley National Park reducing displacement distance and/or stress to animals created by snowmobile traffic and activity in the adjacent park/preserve additions.

The closure will reduce the distance and number of animals that may be forced out of preferred habitats by disturbance from snowmobiling. Particularly, critical winter ranges for moose and caribou in the park areas, and secondarily, furbearers in general. The increased ability for wildlife to remain in their preferred habitats is likely to provide a positive affect on distribution, densities and availability of wildlife for subsistence use.

^{A1} Denali Subsistence Resource Commission Meeting Minutes, April 29, 1996.

^{A2} Denali Subsistence Resource Commission Meeting Minutes, August 9, 1996;

Denali Subsistence Resource Commission Meeting Minutes, June 28, 1993.

Without a closure on snowmobile use, wildlife species would be temporarily and locally displaced by the noise and presence of increasing numbers of snowmobile traffic, particularly in late winter when wildlife are in their most nutritionally stressed condition. Research may be conducted to further assess these displacements.

Caribou: The Cantwell group of the Nelchina Caribou herd utilizes areas both within the former Mount McKinley National Park boundaries and the ANILCA park additions within Windy Creek, Cantwell Creek and the Bull River drainages in late winter.

Failure to implement the closure could result in increased snowmobiling which would likely cause the displacement of caribou from park lands which could affect Cantwell subsistence hunters by making them travel further to harvest Nelchina caribou during the winter caribou season. In 1998, one hundred twenty Federal Registration Permits for caribou were issued to sixty subsistence users eligible to hunt in the ANILCA park additions near Cantwell. Federal subsistence winter caribou season is open from October 21 to March 31.

Moose: Wind blown areas with reduced snow depths in Windy Creek, Cantwell Creek, Jack and Nenana Rivers are important winter use areas for moose. Both local traditional knowledge and wildlife surveys recognize the importance of the Lower Windy Creek and Cantwell Creek areas as critical winter ranges for moose in Broad Pass.

Failure to implement the closure could result in increased use of snowmobiles which would likely to cause the displacement of moose during the late winter from critical wintering areas on park lands in Windy and Cantwell Creek drainages which would significantly increase the stress and nutritional demands upon moose. In 1998, fifty-one Federal registration permits for moose were issued to fifty-one households eligible to hunt in the 1980 additions to Denali National Park near Cantwell.

Furbearers: There is limited biological information available on populations of furbearers within the park. Local subsistence trappers from the Cantwell area curtail trapping efforts in mid winter due to displacement of furbearers as a result of increased snowmobiling in the Broad Pass area ^{A3}.

Ptarmigan: Failure to implement the closure could result in increased snowmobiling in the alpine zones of the park areas during April. This could have a negative affect by causing displacement of ptarmigan populations during their sensitive breeding and nesting period ^{A4}.

^{A3} Denali Subsistence Resource Commission Meeting Minutes, April 29, 1996.

^{A4} Denali Subsistence Resource Commission Meeting Minutes, August 9, 1996;

Denali Subsistence Resource Commission Meeting Minutes, June 28, 1993.

The action of closing the lands within the former Mount McKinley Park to snowmobiling is not expected have an adverse impact on wildlife populations, or to cause the temporary redistribution of some subsistence resources. If research is conducted on impacts from use in the two corridors it can help identify specific types of subsistence resource conflicts and opportunities for future use without those conflicts.

(c) Habitat Loss:

The action of the temporary closure will not result in habitat loss.

2. Restriction of Access:

The temporary closure would only be in effect on the former Mount McKinley National Park lands which are not open to subsistence use activities.

Access for subsistence uses on the ANILCA park and preserve additions is granted pursuant to sections 811(a)(b) and 1110(a). During periods of adequate snow cover, section 811(b) authorizes the use of snowmobiles for subsistence access and section 1110(a) authorizes the use of snowmobiles for traditional activities.

Denali National Park and Preserve is managed according to legislative mandates, federal regulations, National Park Service management policies and guidelines within the 1986 General Management Plan. The closure is not expected to significantly restrict subsistence user access to resources within the park/preserve ANILCA additions.

3. Increase in Competition:

The closure of lands within the old park will likely mitigate the distance some wildlife species will be displaced and increase the availability of critical winter habitat for moose and caribou in the Cantwell and Broad Pass area. The corridors will attract some snowmobile use, but some of the use, which has in recent years been aimed at the old park, will instead be diverted to the ANILCA additions. Increased snowmobiling within the ANILCA park additions may cause the temporary displacement of certain wildlife species. This could force some subsistence users to travel greater distances to harvest resources. However, the action is not expected to significantly restrict subsistence opportunities in the park/preserve.

VI. Availability of Other Lands

No other lands are suitable for the action without causing significant impact upon subsistence users or subsistence access. No major adverse impacts on subsistence uses are expected as a result of this temporary closure of most of the lands within the former Mount McKinley National Park.

VII. Alternatives Considered

Allowance of New Level of Use

The allowance of a new level of use to occur without evaluation within the old park boundaries may constitute a major federal action significantly affecting the human environment and could therefore invoke the National Environmental Policy Act requirement for an Environmental Impact Statement. Because the current planning process for the Backcountry Management Plan already involves a comprehensive assessment of management alternatives and includes an environmental impact statement component, initiation of an EIS at this stage would be premature, duplicative, and induce inappropriate time delays. Currently, insufficient quantitative data exists for assessment of snowmobile impacts to park resources to make an immediate and reasoned determination that snowmobile activity poses no significant threat to park resources and uses. Because of a lack of information and the possible requirement of an EIS prior to implementation of this alternative, the option to allow new levels of use is rejected.

Zoning or Area Establishment

Designation of zones with different use within the old park boundaries requires types and levels of quantitative data not now available to the National Park Service. Consequently, the determination of snowmobile use areas so as to avoid long-term impacts to park resources cannot now be made on a reasoned basis. In addition to a lack of available information, such a decision could constitute a major federal action significantly affecting the human environment and trigger the necessity for an environmental impact statement. The EIS process is incorporated in ongoing planning for completion of the Backcountry Management Plan. To begin a separate EIS solely upon this issue would be redundant and induce considerable time delays to the planning process. Therefore, this alternative is rejected.

VIII. Findings

This analysis concludes that the action would not result in a significant restriction of subsistence uses.

APPENDIX B

FILE MEMORANDUM TEMPORARY CLOSURE OF OLD PARK TO SNOWMACHINE USE CATEGORICAL EXCLUSION

Action The National Park Service (NPS) is proposing to institute a temporary closure to the use of snowmachines within the boundaries of the former Mount McKinley National Park (old park); two corridors have been excluded from the closure and would remain open for snowmobile use for traditional activities. The NPS has managed the area as being closed to the use of snowmachines for the 10 years prior to enactment of the Alaska National Interest Lands Conservation Act (ANILCA) and for the 18 years since.

Consequences No adverse environmental consequences are anticipated because of this action. Because of this action, less machine noise will impair the natural sounds of the area, and the restriction on use of snowmachines is likely to limit the disruption to the natural movements of moose, caribou, and furbearers. Access for traditional activities will not be affected by this closure. The old park remains closed to subsistence activities so there would be no impact on these activities from this closure.

Conversely, if this action is not taken, unregulated snowmachine use in the old park could cause adverse impacts to natural quiet, natural wildlife movements, non-motorized enjoyment of recreation and traditional activities in the old park, and to subsistence activities within the park additions.

Recommendation Under the guidelines issued by the National Park Service implementing Section 1507.3 of the National Environmental Policy Act (NEPA), a Categorical Exclusion listed in 516 Departmental Manual 6, Appendix 7.4 A, applies to this action:

Categorical Exclusion A. (10):

“Modifications or revisions to existing regulations, or the promulgation of new regulations for NPS-administered areas, provided the modifications, revisions or new regulations do not:

- (a) Increase public use to the extent of compromising the nature and character of the area or causing physical damage to it;
- (b) Introduce noncompatible uses which might compromise the nature and characteristics of the area, or cause physical damage to it;
- (c) Conflict with adjacent ownerships or land uses; or
- (d) Cause a nuisance to adjacent owners or occupants.

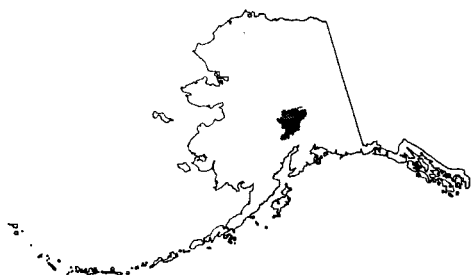
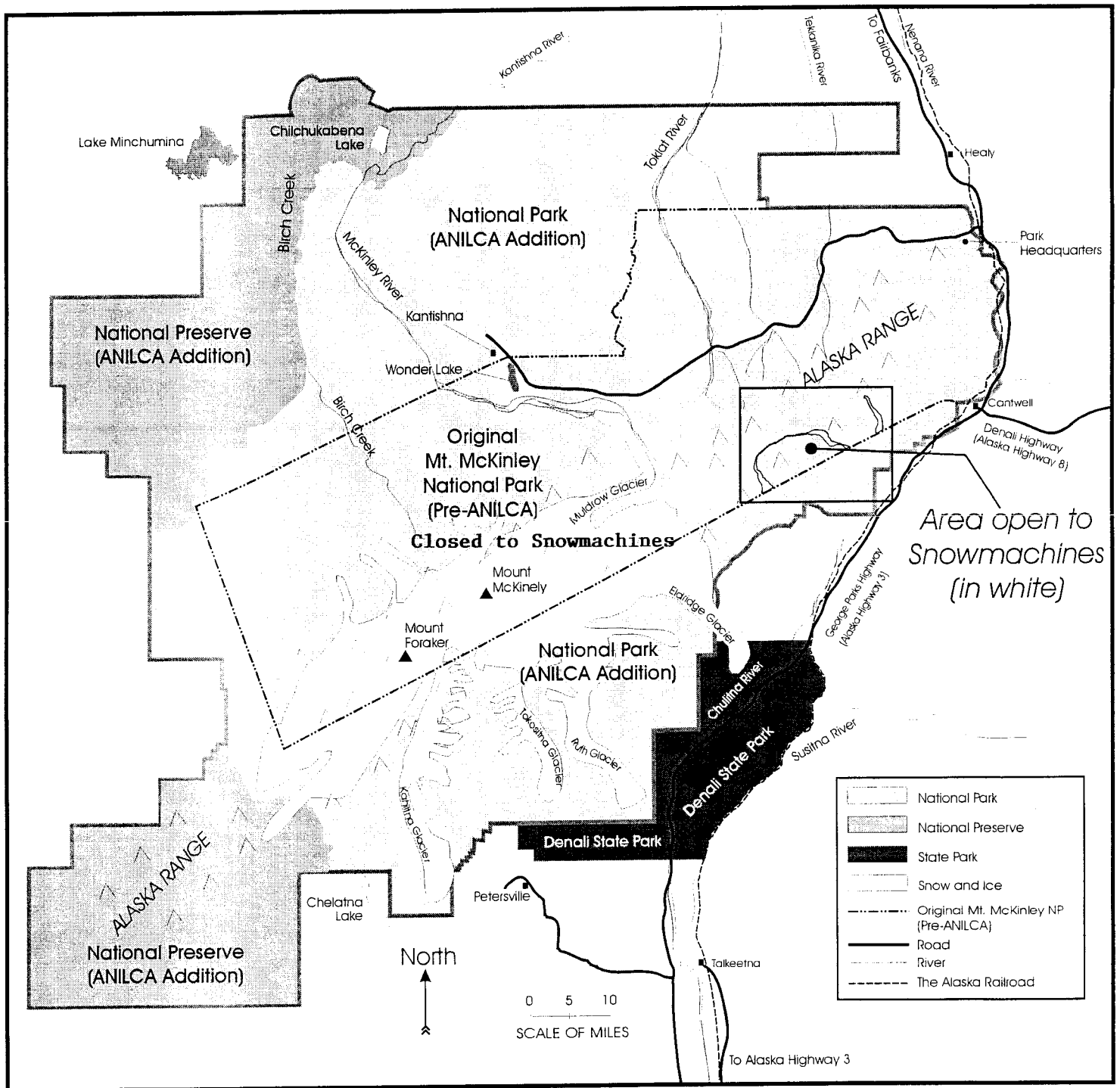
The closure would not (a) result in increased public use or cause physical damage to the area, (b) introduce noncompatible uses, (c) conflict with adjacent ownerships or land uses, or (d) cause a nuisance to adjacent owners or occupants.

This action does not qualify as an exception under the Departmental NEPA guidelines, as listed in Appendix 2 to 516 DM 2. Therefore, additional NEPA assessment and documentation are not needed. The closure may proceed as described in the Statement of Findings.

Approved:

Linda Buswell
Deputy Superintendent
Denali National Park and Preserve

2/3/99
Date



Location in Alaska



PARK/REGION

Denali National Park and Preserve

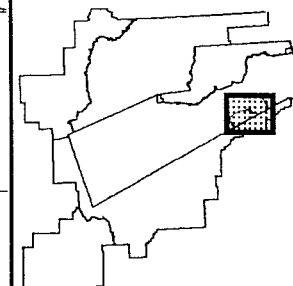
U.S. Department of the Interior • National Park Service

**Denali NP
Temporary Closure**

2/3/99 to 2/2/00

-  Closed to Snowmachines
-  Open to Snowmachines

Location



National Park Service
Denali
National Park
and Preserve

0.5 0 0.5 1 1.5 Miles

1 : 116,368 1 inch = 1.84 miles



Closed

Easy Pass

Closed

Bull River

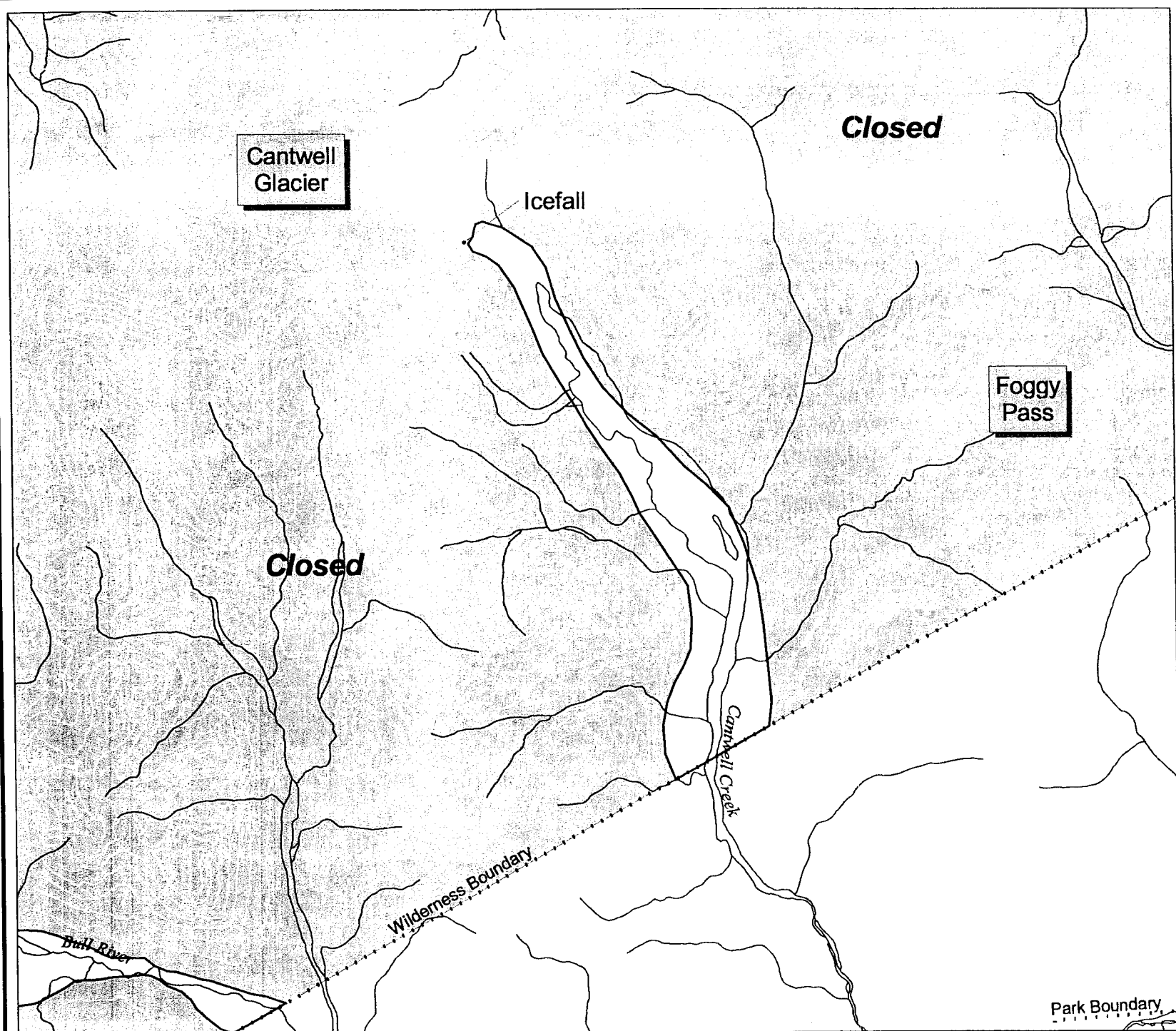
Cosello Creek

Wilderness Boundary



Colorado Creek

West Fork Chulitna River

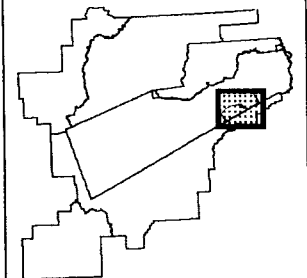
Park Boundary



Denali NP
Temporary Closure
2/3/99 to 2/2/00

-  Closed to Snowmachines
-  Open to Snowmachines

Location



National Park Service
Denali
National Park
and Preserve

0.25 0 0.25 0.5 0.75 1 Miles

1 : 76,170 1 inch = 1.20 miles



Park Boundary